# Instructional and Non-Instructional Noise Training Exercises

Edward A. Barrett, Mining Engineer CMSP

Mining Hearing Loss Prevention Workshop June 21-22, 2005





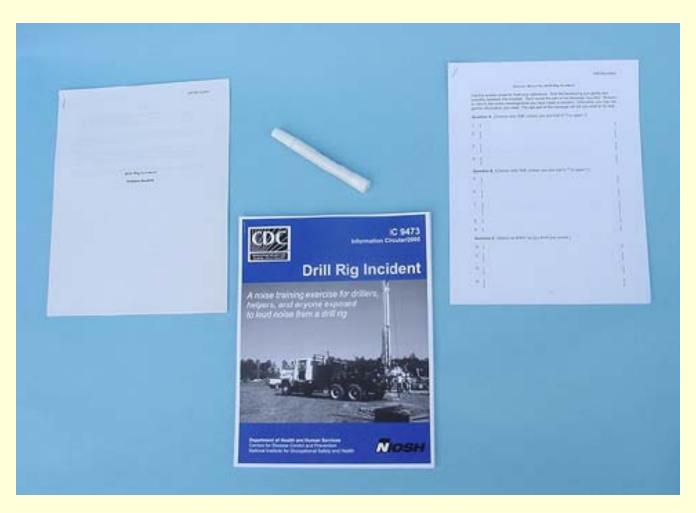
## Noise Training Exercises

- Drill Rig Incident
  - Instructional (Instructor-led)
  - Format: Invisible Ink
  - NIOSH IC # 9473
- Wearing Hearing Protection Properly
  - Non-Instructional (Self-teaching)
  - Format: 3-D Slide Reel
  - NIOSH IC # 9472





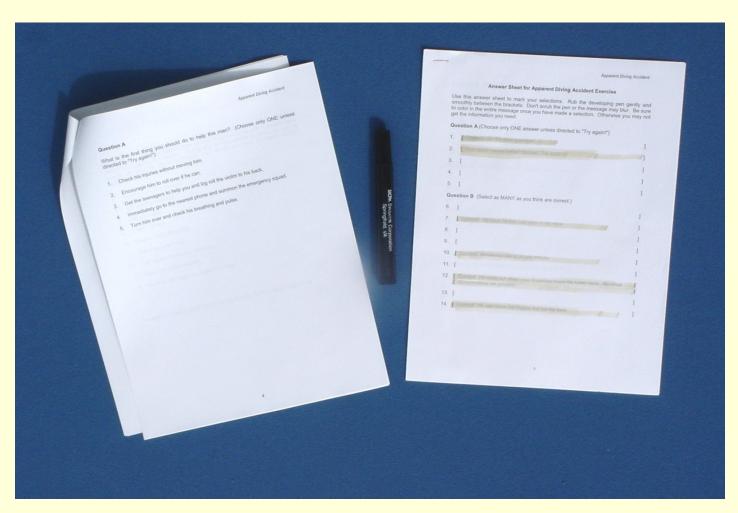
## Drill Rig Incident: Components







#### Invisible Ink







# Drill Rig Incident

#### Subjects covered:

- Important facts about hearing loss
- How to know if you have a hearing loss
- How you can tell if noise is too loud
- How to deal with loud noise
- Using hearing protection properly
- Why you should protect your hearing





#### Training Class: Invisible Ink Exercise







# Wearing Hearing Protection Properly: Components







#### Wearing Hearing Protection Properly

#### Subjects covered:

- Properly inserting foam ear plugs
- Dual protection
- -Bad seal with earmuffs





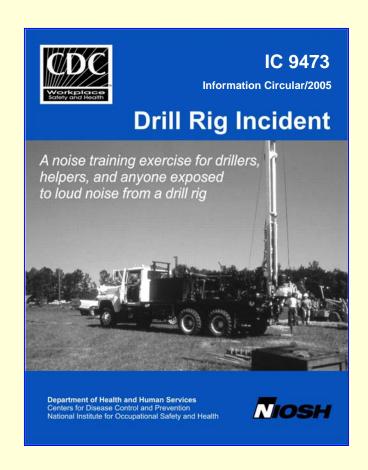
# Training Using 3-D Slide Reel

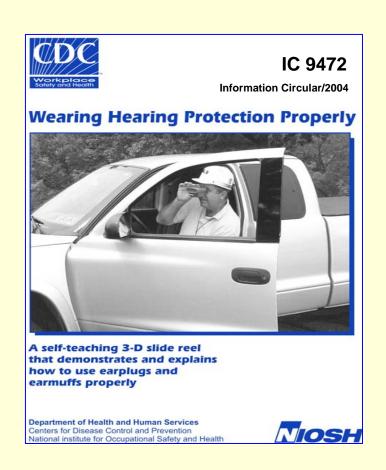






#### Instructor's Manual

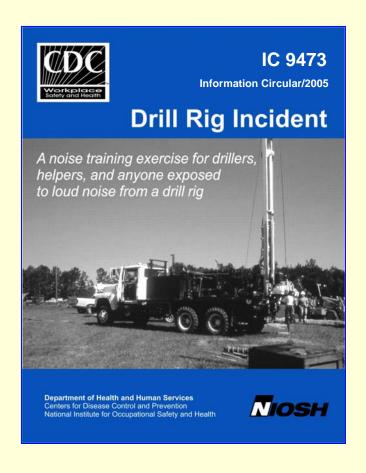








#### Instructor's Manual



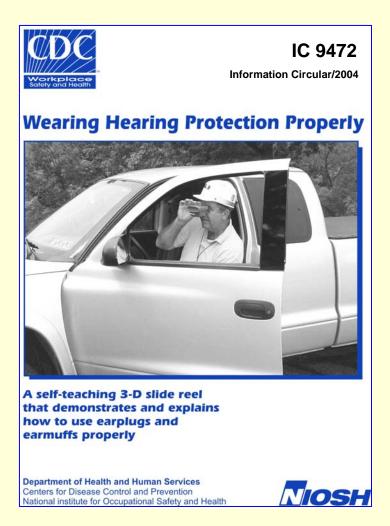
#### **Drill Rig Incident**

Exercise Summary
How to Use the Exercise
Performance Objectives
Master Answer Sheet
Instructor Discussion
Notes
Scoring Key
Etc.





#### Instructor's Manual



# Wearing Hearing Protection Properly

Exercise Summary
How to Use the Exercise
Performance Objectives
Discussion Notes
Etc.





#### Drill Rig Incident: Question G

You think that the program should teach workers how to recognize signs of hearing loss. You want to suggest ways that they can judge for themselves if their hearing is bad. Which of the following would you recommend that Rip include in the training? (Select as MANY as you think are correct)

- 30. They often ask people to repeat what they are saying.
- 31. Someone tells them they talk too loud.
- 32. They have trouble hearing normal conversation.
- 33. They complain about people mumbling.
- 34. They have constant ringing or buzzing in their ears.
- 35. Others complain that the TV is too loud.





## Drill Rig Incident: Question G

- 30. [Correct. If this happens most of the time, it's one sign that a person may have a hearing loss.]
- 31. [This doesn't necessarily mean they have a hearing problem. A loud voice may be normal for some people. **Try again**.]
- 32. [Correct. In most cases, this points to a hearing loss.]
- 33. [Correct. With a hearing loss, it is difficult to hear all of the sounds that are spoken. Talk may sound like people are mumbling.]
- 34. [Correct. Called tinnitus, this is a classic symptom of hearing loss.]
- 35. [Correct.]





## Drill Rig Incident: Question G

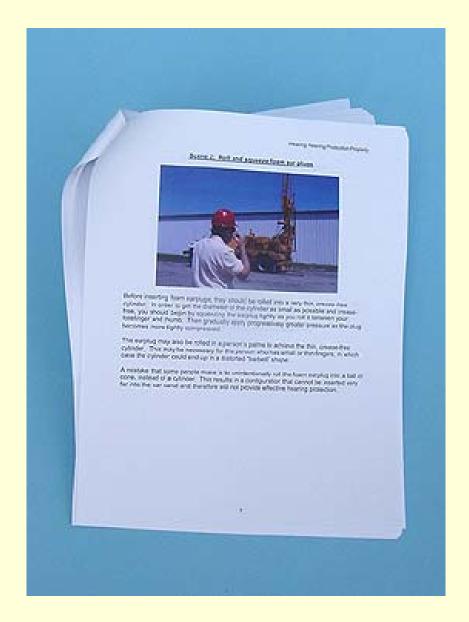
From the Instructor's Manual <u>Discussion Notes</u>:

The correct answers are 30, 32, 33, 34 and 35. It's important for workers to be able to assess their own individual level of hearing. They are more likely to protect the hearing they have left when they know and accept the fact that some of their hearing is gone. Workers need to be aware that one sign of a hearing loss is asking others to repeat what has been said (30). Problems hearing normal conversation (32), complaints about people mumbling (33), and having to turn up the volume on the TV (35) are also signs of hearing loss. Constant buzzing or ringing in the ears, called tinnitus (34), can also indicate a hearing loss.





#### 3-D Slide Reel: Scene 2







#### 3-D Slide Reel: Scene 2







#### 3-D Slide Reel: Scene 2

- Before inserting foam earplugs, they should be rolled into a thin crease-free cylinder. In order to get the diameter of the cylinder as small as possible and crease-free, you should begin by squeezing the earplug lightly as it is being rolled between your forefinger and thumb. Then gradually apply progressively greater pressure as the plug becomes more tightly compressed.
- The earplug may also be rolled in a person's palms to achieve the thin, crease-free cylinder. This may be necessary for the person who has small or thin fingers, in which case the cylinder could end up in a distorted "barbell" shape.
- A mistake that some workers make is to unintentionally roll the foam earplug into a ball or cone, instead of a cylinder. This results in a configuration that cannot be inserted very far into the ear canal and, therefore, is incapable of providing effective protection.

#### **Drill Rig Incident**

#### You get...

- Problem Booklet
- Answer sheet
- Instructor's Manual

#### You supply...

Developing pens

# Wearing Hearing Protection Properly You get...

- 3-D Slide Reel
- Instructor's Manual

#### You supply...

- 3-D Viewer





### Availability of Training Exercises

NIOSH – Publications Dissemination
4676 Columbia Parkway
Cincinnati, OH 45226-1998
1-800-35-NIOSH
(1-800-356-4674)
(513) 533-8573 fax
pubstaft@cdc.gov
www.cdc.gov/niosh





## **Availability of Training Exercises**

Bobbie Calhoun
NIOSH Pittsburgh Research Laboratory
626 Cochrans Mill Road
P.O. Box 18070
Pittsburgh, PA 15236
(412) 386-5901
(412) 386-5902 fax

minetraining@cdc.gov





#### For more information

Edward A. Barrett

NIOSH Pittsburgh Research Laboratory

Phone: 412-386-5068 Fax: 412-386-4864

ehb1@cdc.gov

www.cdc.gov/niosh/mining



